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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,158	11/23/2005	Seiji Hidaka	M1071.1945	1908

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EXAMINER	
STEVENS, GERALD D	

ART UNIT	PAPER NUMBER
2817	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/558,158	HIDAKA ET AL.	
	Examiner	Art Unit	
	GERALD STEVENS	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/15/2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-16 and 18-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7,8,15,16,18-20, and 24-26* is/are rejected.

7)☒ Claim(s) *9-14 and 21-23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 7, 18, & 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mukaiyama et al.

Regarding claims 7, 18, & 24, Mukaiyama, as depicted in fig. 18, exemplarily teaches having a dielectric resonator device that uses a slot line (56) and a PDTL (57, planar dielectric transmission line) as an input and output means (pg. 7 par. 0107, i.e. **claim 24**) comprising: a dielectric substrate (1, i.e. a second dielectric layer) that is disposed between an electrode film (2, i.e. a first conductive layer) and another electrode film (3, i.e. a third conductive layer). Since the two electrode films (2, 3) are attached to the dielectric substrate (1) on its upper and lower sides the three layers are therefore laminated together (i.e. a surface of the third layer is disposed on a surface of the dielectric substrate, i.e. **claim 18**). Disposed upon the top electrode film (2, i.e. a first conductive layer) in successive order are two openings, which form two resonators (55A, 54A, i.e. first and second non-conductive areas) and disposed upon the bottom electrode film (3, i.e. a third conductive layer) in successive order is another set of two

openings, which form two resonators (55B, 54B, i.e. first and second non-conductive areas) that are directly aligned with their corresponding resonators (55A, 54A) on the top electrode film (2). The shape of the first resonator (55A, i.e. first nonconductive area) formed in the top electrode film (2, i.e. first conductive layer) has a shape that is different from the first resonator (55B, i.e. first nonconductive area) that is formed on the bottom electrode film (i.e. third conductive layer). And, since the two resonators (55A,54A & 55B,54B) located on the top and bottom electrode films (2,3) are directly aligned with each other, the corresponding resonators (54A & 54B, 55A & 55B, i.e. nonconductive areas) overlap each other (i.e. overlap in the lamination direction to form inductive areas) and the portions of electrode film (2,3) located between the successively disposed resonators (55A & 54A, 55B & 54B) also overlap each other (i.e. a portion of the first conductive areas of the first and third layers overlap in the lamination direction to form a capacitive area).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaiyama et al in view of Kajikawa et al (of record).

Regarding claim 8, Mukaiyama does not show a resonator wherein the laminate contains additional layers disposed to form at least one additional superposed set of said first, second, and third layers.

Kajikawa, as depicted in Fig. 2, discloses a similar resonator having a plurality of superposed alternately stacked dielectric layers 12, 13 and conductor layers 12a, 12b, 13a, 13b.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide a plurality of superposed alternately stacked dielectric layers and conductor layers in Hiratsuka's device in order to provide the benefit of reducing the size of the filter/resonator, and to provide stronger coupling, as taught by Kajikawa (Col. 9, lines 30-35).

5. Claims 15 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaiyama et al.

Regarding claim 15, Mukaiyama, as depicted in figs. 1-3, further teaches having the shape of the two successively disposed resonators (55A & 54A) located on the top electrode film (2, i.e. first conductive layer) being shaped differently from one another with the two corresponding resonators (55B & 54B) located on the bottom electrode film (3, i.e. third conductive layer) also having different shapes (i.e. **claim 16**) and having a circular resonator (4) formed on a dielectric substrate (1).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have replaced the rectangular resonators such as taught in fig. 18 with the

circular resonator such as taught in figs. 1-3 because it is obvious to have used an art equivalent TE_{010} mode dielectric resonator such as taught by the circular shape TE_{010} in figs. 1-3 in the place of another equivalent TE_{010} dielectric resonator such as taught in fig. 18.

6. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaiyama et al in view of Hiratsuka et al (of record).

Regarding claims 19 & 20, Mukaiyama teaches all of the elements as discussed above in claim 18, but fails to teach having a shielding electrode that is disposed on at least one outermost surface of the dielectric substrate on which the third layer is disposed and having a conductive cap that covers the first layer.

Hiratsuka, as shown in fig. 8, teaches having a dielectric filter comprising: a lower conductive case (112, i.e. shielding electrode) being disposed on at least one outermost surface of the dielectric substrate (120) on which the electrode (121b, i.e. third conductive layer) is disposed. And an upper conductive case (111, i.e. conductive cap) that covers another electrode (121a, i.e. first conductive layer).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have added the upper and lower conductive cases such as taught by Hiratsuka as to have encased the dielectric resonator device such as taught by Mukaiyama because the upper and lower conductive cases encasing a filter such as taught by Hiratsuka provide the benefit of confining the electromagnetic energy substantially to the dielectric resonators (col. 2 lines 4-19).

Therefore, as an obvious consequence of the above combination, the top electrode film (Mukaiyama: Fig. 18 element 2, i.e. a first conductive layer) is covered by the upper conductive case (Hiratsuka: fig. 8 element 111) and the bottom electrode film (Mukaiyama: fig. 18 element 3, i.e. a third conductive layer) has the lower conductive case (Hiratsuka: fig. 8 element 112) disposed around it.

Claim Rejections - 35 USC § 103

7. Claims 25 & 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaiyama et al in combination with Hiratsuka et al (of record).

Regarding claims 25 & 26, Mukaiyama fails to teach a communication apparatus comprising a filter of claim 7 coupled to an antenna.

Hiratsuka, as depicted in fig, 7, exemplarily teaches having a communications device comprising: an antenna (53) that is coupled to a duplexer (30), which contains a dielectric filter (42).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have replaced the dielectric filter such as taught by Hiratsuka with the dielectric resonator device such as taught by Mukaiyama because it is obvious to have replaced a specific art equivalent dielectric filter in the place of another generic equivalent dielectric filter.

Allowable Subject Matter

8. Claims 9-14 & 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claim 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD STEVENS whose telephone number is (571)270-5076. The examiner can normally be reached on Mon-Fri 7:30am - 5:00pm EST alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817

GDS